IMPERIAL
DEPARTMENT OF AGRICULTURE
FOR THE WEST INDIES.

IMPERIAL BUREAU
29 NOV. 1927
OF MYCOLOGY

REPORT

ON THE

AGRICULTURAL DEPARTMENT, ST. VINCENT,

FOR THE YEAR

1926.

TRINIDAD.
ISSUED BY THE IMPERIAL COMMISSIONER OF AGRICULTURE
FOR THE WEST INDIES.

1927.

[Price Sixpence.]

REPORTS

ON THE

BOTANIC STATION, ECONOMIC PLOTS, AND AGRICULTURAL EDUCATION, ST. VINCENT.

Annual Reports on certain Economic Experiments conducted in connexion with the Botanic Station, 1900–2.

Annual Reports on the Botanic Station for the years 1901 and 1902.

Annual Reports on the Botanic Station, Economic Experiments, and Agricultural Education for the years 1902–3 to 1918–26.

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LETTER OF TRANSMITTAL.

o. C. A. 488.

TRINIDAD, 13th September, 1927.

Commissioner of Agriculture to the Administrator, St. Vincent.

SIR,

I have the honour to transmit herewith the Annual Report on the working of the St. Vincent Department of Agriculture for the year 1926.

2. The report indicates that the usual routine work of the Department has been carried on and that attention has been given as in past years to the principal and minor crops of the Colony.

3. A striking feature of the year's experience is the serious outbreak of the cotton worm and the lack of insecticides to meet the attack. Arrangement should be made to ensure sufficient supplies kept in stock to meet such an emergency.

4. The low yield of cotton per acre is attributed to the effect of cotton worm attack. The Arrowroot crop is stated to have been a fairly large one, with fair prices, with a rather remarkable increase in the amount shipped to the markets of the United States. The amount of syrup produced appears to have been satisfactory but the price was low. It is gratifying to note that there is a steady rate of increase from year to year in the area planted to coconuts, and that the number of nuts and the amount of copra exported is rapidly increasing. The exports of Ground nuts and peas and beans show a falling off in the last few years.

5. The recorded rainfall for the year at the Botanic Gardens was 79·17 inches, which was 22·37 inches below the 101·23 inches given as the average annual rainfall for the 33 years just preceding.

6. The report on the working of the Agricultural Credit Societies in St. Vincent and the Grenadines indicates that while some of them are functioning properly, others are doing nothing, and members appear to be making no effort to pay off their loans.

7. The report on the Government Cotton Factory shows a decrease in the amount of cotton ginned, and a very considerable increase in the amount of stained cotton handled by the Ginnery, the percentage of stained cotton being 21·14 as against a percentage of 11·21 in the previous season. An explanation of this increase in the stains in the Island's crop would be of interest. It would be of interest also if the cost of working the Cotton Factory could be given in the report.

8. The usual Veterinary Report is included. This shows that no case of anthrax has occurred since 1914.

I have, etc.,

(Sgd.) H. A. BALLOU,
Commissioner of Agriculture.
Imperial College of Tropical Agriculture.

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Staff ot Agricultural Department, St. Vincent.

Agricultural Superintendent and Inspector, Agricultural Credit Societies	T. P. JACKSON.
Assistant Agricultural Superintendent	
Government Veterinary Surgeon	
Cotton Inspector and Government Vaccinating Officer ...	L. BROWN.
Foreman, Experiment Station and Agricultural Instructor	F. A. SIMMONS.
Foreman, Botanic Station and Inspector, Cotton Stainer Control	E. BANFIELD.
Officer in Training	H. A. NANTON.
Clerical Assistant	Miss D. E. WALL.

COTTON RESEARCH.

Provided by the Empire Cotton Growing Corporation.

Research Officer to April 4th	L. H. BURD, *B.A.*

REPORT ON THE AGRICULTURAL DEPARTMENT ST. VINCENT.

For the year ended December 31, 1926.

Work in the Botanic Gardens and Observations on Plants.

St. Vincent was particularly fortunate in that it escaped the storms that devastated some other West Indian islands. The outstanding event from a climatological view-point for the year 1926, was its dryness. Only 78·86 inches of rain were recorded, the rainfall being the lowest on record since 1894. The average for the past 33 years, was 101·23 inches. The soil in these gardens is of a very light nature and anything approaching a protracted drought quickly and adversely affects vegetation. Such conditions were obtained during the year and in consequence several palms died. Fortunately other specimens of the same plants are growing in the Gardens.

The routine work in the Gardens was maintained and efforts to improve their appearance were continued. All the old and unsightly trees on each side of the Central Walk have now been replaced by others, and it can be safely said that the results justify the work. Two new concrete drains were constructed, one crossing the lawn by the Rose Garden, and the other crossing that part known as Coffee Ground. During heavy rains both of these carry large volumes of water and, in the past, serious scouring occurred which resulted in the formation of depressions and hummocks in their beds ; a state of affairs far from ornamental. This work, and similar work done in the past, is at least a testimonial to the value of continuity of policy. Perhaps the only drawback to such drains in the St. Vincent Gardens is that they appear quite white for some months after they are made. This is due to the quantity of salt that is in the sand used in the concrete, but exposure to the weather rectifies this.

The St. Vincent Gardens possess several specimens of handsome flowering trees, most of which flower during the early part of each year. The first of these to open is *Jacaranda ovalifolia*, R. Br., which flowers towards the end of February. This plant produces flowers that are almost sky blue in colour borne on long panicles, and these combined with its graceful bipinnate leaves impart to it an appearance of distinctive beauty. Closely following the flowering of this in chronological order is the Queen's Flower (*Lagerstroemia Flos-Reginae*, Retz). Early in the day the flowers of this tree are of a beautiful rose colour, but towards evening they become purplish. The flowers borne by the St. Vincent trees possess more purple in them than the flowers borne by trees that the writer has seen growing in other West Indian islands. In India, this tree is valued for its timber which is blood red in colour, and is used in that country for boat building. The native Indian physicians esteem various parts medicinal, the astringent root being used as a remedy for thrush, its bark and leaves as a purgative and its seeds as a narcotic. Another tree that is strikingly beautiful when in flower is the Pink Poui *Tabebuia pentaphylla*, and another is the Yellow Poui (*Tecoma spectabilis*, Planch). The latter when in flower has the appearance of a gigantic Laburnum tree. The Cassias *C. Fistula*, L. and C. *grandis*, L. are also worthy of mention Cassia Fistula is known under the name of "Pudding Pipe" on account of its smooth, cylindrical pod some two or more feet in length and about three quarters of an inch in thickness. The interior is divided into numerous transverse partitions each containing a seed embedded in pulp, of a sweet pleasant taste, which forms an important laxative medicine. Another tree which bears strikingly handsome flowers is *Portlandia grandiflora*, L. These are bell shaped and white in colour, about seven inches long. They are fragrant, and this fragrance becomes intensified at night. The tree does not attain a great height.

Bougainvillaeas.

Some half a dozen of the Bougainvillaea crosses, *B. spectabilis* Var. *laterita* B. *glabra* Var. *sanderiana* mentioned in the Report on this Department for 192 flowered during the year. With two exceptions the flowers produced were so fe that descriptions cannot be given. The bracts of the flowers of one of the exce tions mentioned was very similar to *B. glabra* Var. *sanderiana*, but perhaps a little brighter, the other was a beautiful shade of pink, rose biege. After seei the plant in flower, Lady Seton James, the wife of His Excellency, the Governo of the Windward Islands, consented to allow this Bougainvillea to be called aft her ; in future this will be known as Bougainvillaea Lady Seton James.

An attempt has been made to cross some of these hybrids with the paren It is too early to say whether this has been successful or not, but there are indic tions that it has been so.

Plant Importations.

Three lots of seeds of *Taraktogenos Kurzii*, King, were received from t Honourable the Colonial Surgeon, he having obtained them from India. Son twenty plants were raised from these. Another consignment consisting of o thousand and fifty seeds were obtained from Burma ; not one of these germinate It is quite evident that the seeds of this plant quickly lose their vitality. T interest in this tree lies in the fact that it yields Chaulmoogra oil, used in t treatment of leprosy.

Work in the Nurseries and Distribution of Plants.

The following is a list of plants, seeds, etc., distributed from the Nurseri attached to the Botanic and Experiment Stations :—

Economic and Decorative Plants.

Coco-nut	3,695
Tobacco seedlings	200
Miscellaneous decorative	47
„ economic	25
Mango (grafted)	10
	3,977

Cuttings.

Cane Varieties	45,900
Sweet potato	16,850
Gliricidia (Madura)	300
	63,050

Seeds.

Cotton	353 lb.
Ground-nuts	94 „
Bengal Beans	46 „
Onion	2 „
Papaw	½ „
	495½ „

The number of coco-nut plants sent out during the past year was more tha three times the number sent out during 1925. The number of coco-nut plan sent out from the nurseries in any one year is not however a true index of a increase or decrease in area planted under this crop, as many growers raise plan in nurseries on their own estates. The number of cuttings of cane plants di tributed was slightly larger than during the previous year. This, however, do

ndicate that planters are taking an interest in the question of cane varieties. When omparing the number of cuttings of sweet potatoes distributed, with those sent ut in 1925, it will be seen that more than eight times the number were sent out. Practically all of these were varieties raised during the past few years by this Department, it being realised that these can usually be relied upon to give a heavier yield than those regarded as standard varieties. The work of raising new varieties of this crop is being continued, and during the year quite a large number of new ones were obtained.

No new varieties of sugar cane were raised during the year, this was due to stress of more important work. Of those obtained in 1925 the following were retained for further trial :—V. 2001, V. 2118, V. 2200, V. 2219, and V. 2400. The seed bearing parent of all, with the exception of the last named, was B. 6450. The parent of the exception is unknown.

Inspection and Fumigation of Imported Plants and Seeds.

The following is a list of plants, etc, which were imported and fumigated under the Importation of Plant Diseases Protection Ordinance, 1906 :—

Seeds	...	...	4 parcels.
Bulbs	...	...	6 „
Ornamental plants	...	...	7 boxes.
Seeds of ornamental plants		...	1 parcel.
Sour grass roots	...	...	2 bags.

Manurial Experiments at the Experiment Stations.

Sea Island Cotton.

The series of manurial experiments with Sea Island cotton now under discussion have been conducted for the past five years, and during that period no variation in the manurial treatment accorded the plots has taken place. The plots are $\frac{1}{40}$ acre in area, rectangular in shape, and there are five series each repeated four times.

The manurial treatment received by the plots was as follows :—

Series	1	... Control ; no manure.
„	2	... Pen manure at the rate of ten tons per acre.
„	3	... Green dressing.
„	4	... „ „ and potash calculated as K_2O at the rate of 50 lb. per acre.
„	5	... Green dressing and high grade Nitrapo at the rate of 2 cwt. per acre.

The mean results for the past five years show that the return from the plots in series 2 gave an average increased yield over the control plot of 53 per cent. In the series which received only green dressing the increase amounted to 39 per cent, while those which received a dressing of potash in addition to the green dressing show an increased return of 45 per cent. Series 5 which received Nitrapo and green dressing showed an increase over the no manure plot of 47 per cent. Nitrapo is a trade term for a manure containing 15 to 17 per cent nitrogen calculated as ammonia, and 15 to 17 per cent soluble potash.

From the above it is questionable whether the addition of inorganic to the organic manures has resulted in yields sufficiently large to warrant their use. On the other hand they do indicate that the use of organic manures results in increase yields that are appreciable.

Maize (*Indian Corn.*)

Manurial experiments with this crop have been carried out for the past five years. The plots are 240 square feet in area. There are seven series each one in duplicate. The manurial treatment of the plots was as follows :—

Series	1	...	No manure.
,,	2	...	Nitrogen, 30 lb. per acre as sulphate of ammoni
,,	3	...	Potash 30 lb. as ,, ,, ,, ,, ,, potas
,,	4	...	Nitrogen and potash as above.
,,	5	...	Cotton seed meal, 1,000 lb. per acre.
,,	6	...	Potash as above, cotton seed meal as above.
,,	7	...	Pen manure, 20 tons per acre.

The average percentage increase of produce for the five years obtained fror the plots receiving manure do not show any great variation except in the instanc where pen manure was applied, and even in this case it is not particularly striking The average percentage increase over that obtained from the no manure plots is a follows :—

Series.	Percentage increase over no manure plot.	Series.	Percentage increase over no manure plot.
2	12	3	14
4	18	5	12
6	18	7	21

Ground Nuts.

Manurial experiments have been conducted with this crop for the same perio of time as for cotton and maize. The manurial treatment accorded the plots wa exactly similar to that given to the maize plots except that pen manure was applie at the rate of 20 tons per acre instead of 15 tons; the plots were in triplicate They were rectangular in shape and each was 248 square feet in area.

The average percentage increase for five years over that obtained fron the n manure plot is as follows :—

Series.	Percentage increase.	Series.	Percentage increase.
2	20	5	23
3	19	6	19
4	24	7	17

Increases were obtained from all plots receiving manure, but there is n striking difference in favour of any manure or combination of manures.

Sweet Potato Varieties.

This experiment was laid out in the dry season, the vines being planted or December 1st, and the plots reaped on April 15th. As a general rule swee potatoes are somewhat scarce in these months. Thus the crops reaped in the dry season often bring higher prices than those reaped during the wet, the demand being brisker not only in the local market but also in intercolonial markets. There is also one other point ; during the months in question sweet potatoes flower, and the quantity of flowers produced varies very considerably with the variety, some bearing few and some large numbers. It was thought that there might be some connection between flower production and yield, and as will be seen from the following table such an assumption is probably true.

The area of the plots devoted to these trials was 113 square yards; they were not in duplicate. The following results are given calculated to pounds of potatoes per acre.

Variety.	Yield per acre.	Remarks.
V. 52	7,950	Practically no flowers, about one per 200 plants.
V. 140	5,118	Flowered sparsely.
V. 156	4,283	Flowered moderately.
V. 159	3,630	,, ,,
V. 161	3,086	,, ,,
V. 160	3,049	Flowered profusely.
V. 146	2,723	,, ,,
V. 143	1,815	,, ,,
V. 145	944	Flowered moderately.

Of the above V. 156, V. 159, V. 160, and V. 161 are new varieties ; this is the first time that they have been tried in experiments.

The variety V. 52 heads the list and so maintained its reputation; it is possibly the best all round variety known in St. Vincent, and is as popular with planters as it deserves to be. As will be observed from the above out of 200 vines of V. 52 examined only one formed flowers ; in addition the variety which appears second on the list also formed flowers sparsely.

Ground Nut Varieties.

These plots were planted on July 29th and reaped on December 6th, four plots of each variety were planted and the results as given below are calculated to yield of dry nuts per acre. Each plot was 248 square feet in area.

Plot.	Variety.	Yield per acre in terms of dried nuts.	Mean.	Increase or decrease on Local Variety.
1	Local	998		
2	,,	907		
3	,,	1,087		
4	,,	998	998	—
1	Virginnia Bunch	816		
2	,,	1,179.		
3	,,	998		
4	,,	998	998	0
1	Improved	1,270		
2	,,	1,270		
3	,,	1,179		
4	,,	1,089	1,202	+22
1	African	1,179		
2	,,	998		
3	,,	998		
4	,,	726	975	—2

The variety "Improved" showed an estimated yield over the local variety of some 20%.

Cotton Selection.

The figures put forward are for the season 1925-26. As pointed out on previous occasions the examination of cotton material synchronises with the writing of this publication, and as one individual does both, it is physically impossible for the work now discussed to be up to date.

In the following table lint lengths are put forward in millimetres and the figures in the lint indices as grammes. The plants from which the results are obtained have been grouped in families ; the crosses in the tables indicate parental values.

SEA ISLAND.

Lint Length in Millemetres.

Fam.	51	52	53	54	55	56	57	58
D. 19 ...			2	3	7	5	1	+1
D. 27 ...			2	3	7	5	1	+1
D. 20 ...			2	3	7	5	1	+1
D. 4 ...			2	3	7	5	1	+1
G. 15 ...		2		3	3	3	1	+1
G. 14 ...		2		3	3	3	1	+1
G. 3 ...		2		3	3	+3	1	1
I. 8 ...	1				3	5	2	+2
I. 11 ...	1				3	5	2	+2
I. 12 ...	1				3	5	2	+2
I. 4 ...	1				3	5	2	+2
K. 8 ...					3		2	+1
L. 1 ...								+1
A. 29 ...	1		4	6	7		+2	
A. 9 ...	1		4	6	+7		2	
A. 18 ...	1		4	6	+7		2	
A. 23 ...	1		4	+6	7		2	
A. 6 ...	1		+4	6	7		2	
B. 31 ...				3	3	6	+2	
B. 27 ...				3	3	6	+2	
B. 19 ...				3	3	+6	2	
B. 20 ...				3	3	+6	2	
B. 22 ...				3	3	+6	2	
B. 14 ...				3	+3	6	2	
B. 32 ...				3	+3	6	2	
J. 6 ...					2	+1	2	
M. 1 ...					1	3	+	
C. 18 ...					4	+4		
E. 8 ...	2			4	+3	4		
E. 9 ...	2			4	+3	4		
E. 19 ...	2			4	+3	4		
E. 10 ...	2			+4	3	4		
E. 5 ...	2			4	3	+4		
E. 7 ...	2			4	3	+4		
E. 16 ...	2			4	3	+4		
H. 4 ...	3	3	2	3	+3			
H. 17 ...	3	3	2	3	+3			
H. 21 ...	3	3	2	3	+3			
H. 6 ...	3	+3	2	3	3			
H. 7 ...	3	3	2	+3	3			
H. 9 ...	3	3	2	3	+3			
H. 2 ...	+3	3	2	3	3			
H. 8 ...	3	3	2	3	+3			

SEA ISLAND.

Lint Index in Grammes.

Fam.	4·0	4·25	4·50	4·75	5·0	5·25	5·50	5·75	6·0
D. 19 ...	1	4		7	4	1		+2	
D. 27 ...	1	4		7	4	1		+2	
D. 20 ...	1	4		7	+4	1		2	
D. 4 ...	1	4		7	4	+1		2	
G. 15 ...			2	2	+4	2	1		
G. 14 ...			2	2	4	+2	1		
G. 3 ...			2	2	+4	2	1		
I. 8 ...		1	1	2	+5		1		
I. 10 ...		1	1	+2	5		1		
I. 12 ...		1	1	2	5	+	1		
I. 4 ...		1	1	2	5		+1		
K. 8 ...				1	4		+1		
L. 1 ...				+1					
A. 29 ...			3	1	8	+5	3		
A. 9 ...			3	1	8	5	+3		
A. 18 ...			3	1	8	+5	3		
A. 23 ...			3	1	8	5	+3		
A. 6 ...			3	1	8	5	+3		
B. 31 ...	1	1	4		+6		2		
B. 27 ...	1	1	4		6	+	2		
B. 19 ...	1	1	4		6		+2		
B. 20 ...	1	1	4		6		+2		
B. 22 ...	1	1	4		6		+2		
B. 14 ...	1	1	4		6		+2		
B. 32 ...	1	1	4		6		+2		
J. 6 ...			1	+1	1			1	
M. 1 ...				+			1	1	1
C. 18 ...			5	2	+8				
E. 8 ...				1	1	+3	7		1
E. 9 ...				1	+1	3	7		1
E. 19 ...				1	1	+3	7		1
E. 10 ...				1	1	3	+7		1
E. 5 ...				1	1	3	7		+1
E. 7 ...				1	1	3	+7		1
E. 16 ...				1	1	3	+7		1
H. 4 ...					3	1	+		
H. 17 ...					3	1	+		
H. 21 ...					3	1	+		
H. 6 ...					3	1		+	
H. 7 ...					3	1			+
H. 9 ...					3	1		+	
H. 2 ...					3	1		+	
H. 8 ...					3	1		+	

MARIE GALANTE.

In the following the results obtained from selections from Marie Galan[illegible] ercon are given.

LINT LENGTH IN MILLIMETRES.

Fam.	40	41	42	43	44	45	46	47	48	49	50
C. 17					1				−2	3	
C. 4					1				0	−3	
C. 8					1				−2	3	
C. 2					1				0	−3	
C. 11					1				0	−3	
C. 10					1			+1	0	3	
C. 16					1			0	−2	3	
C. 3							−2				
C. 13				1	1		1			1	
C. 12				2	1		1	1	−2	1	
E. 16				1	3	−3	2				
E. 22				1	3	3	−2				
E. 1				1	3	3	+2				
E. 7				1	1	+3	3	2			
E. 11				1	1	3	−3	2			
E. 4				1	1	3	3	−2			
D. 7					1		3	2	−2	1	
D. 10					1		3	2	0	−1	
D. 5					1		3	+2	2	1	
D. 12					−1		3	2	2	1	
D. 3					1		−3	2	2	1	
D. 6					1		−3	2	2	1	
D. 9					1		3	2	2	1	−
A. 18				1		3	−2	1	1		
A. 24				1		3	2	1	−1		
A. 28				1		3	−2	1	1		
A. 5						2		+1			
A. 4						+2		1			
A. 3						−1		1			

MARIE GALANTE.

LINT INDEX IN GRAMMES.

Farm.	2·0	2·25	2·50	2·75	3·1	3·3	3·7	4·1	4·25	4·50
17 ...				+3	10	2	1			
4 ...				3	+10	2	1			
8 ...				3	+10	2	1			
2 ...				2	+10	2	1			
11 ...				2	10	+2	1			
10 ...				2	10	+2	1			
16 ...				2	10	+2	1			
3 ...					2	+1				
13 ...	1	1	2			+1				
12 ...		1		2	3	+2	1			
18 ...					2	+2	+7	1		1
25 ...					2	2	+7	1		
. 1 ...					2	2	+7	1		
. 7 ...					2	2	+7	1		
. 11 ...					2	2	+7	1		
. 4 ...					2	2	+7	1		
. 7 ...					2	−4	3	1		
. 20 ...					2	4	3	−1		
. 5 ...					2	4	+3	1		
. 12 ...					2	+4	3	1		
. 3 ...					2	4	+3	1		
. 6 ...					2	4	+3	1		
. 9 ...					2	4	+3	1		
. 18 ...					3	+4	1			
. 24 ...					3	+4	1			
. 28 ...					3	−4	1			
A. 5 ...						1	+2			
A. 4 ...						−1	2			
A. 3 ...						1	+2			

If time allows, during the coming year the above, or at least some of the above, will be tested for purity by means of Bolls Target Diagram method.

Work Connected with Insect and Fungus Pests and their Control.

THE COTTON WORM (*Alabama argillacea, Hubn.*)

During the year repeated and destructive attacks of caterpillars were made on the cotton crop. A slight attack occurred in fields in the Southern part of the island in July, and as light attacks of this pest are often experienced in this district, no alarm was felt. Towards the middle of August, in consequence of that attacks of greater severity than those experienced in the past might be expected. In these circumstances it was thought advisable to publish a leaflet [illegible] of the insect; this was done and in it control measures were put forward. Subsequently attacks in certain districts were anticipated and "Notices" warning planters that these would occur were published in the local papers. During the attacks numerous specimens of the moth of the Arrowroot Skipper (*Calpodes ethlius, Cramer*) were seen flying in cotton fields and many planters were of the opinion that this insect was responsible for the trouble; this, however, was not so.

Towards the end of August there was a distinct abatement in the numbers of caterpillars found in fields and up to this date the attacks, broadly speaking, were confined to cotton districts moderately near to Kingstown. In September the attacks began to spread till they reached maximum intensity in October, gradually dying away in November. Cotton growing in all districts of the island

was damaged by this pest, and as far as the writer is aware it is the first time a record that such an attack has occurred. It is believed that invasions of cot moths from South America are responsible for the periodical appearance of pest in the West Indies, and it would seem as though there were several s invasions during 1926. A small Trichogramma fly did much good towards ke ing down numbers, and at one time in September egg parasitism at the Experim Station reached 100 per cent. It may be that the gap between the various i vasions was too great for the parasite to bridge in numbers ; the intervals in d were as follows :—22, 19, 9, 19, 7, 15, the migratory habit of the moths wo also mitigate against complete control by egg parasitism. However, it is possi this Hymenoptera did as much to control the caterpillar attacks as dusting. I doubtedly other parasites were present and active, of these Jack Spaniards (*Poli annularis*) and Chalcis flies, possibly *C. ovata* should be noted.

To obtain some idea of the intensity of one attack ten leaves were taken fr ten plants and the numbers of caterpillar eggs on each were counted. The nu ber of leaves on the plants were counted and from this data the following inform tion was obtained :—

Plant.	Average No. of eggs laid on leaf. Counts made on 10 leaves.	Maximum laid on one leaf.	Minimum laid on one leaf.	Leaves on plant.	Calculated No. eggs laid per pla
1	13·7	34	3	74	1,013
2	14·1	38	5	79	1,114
3	9·8	22	2	67	657
4	7·3	23	1	42	307
5	9·1	23	2	33	300
6	10·9	30	2	54	589
7	5·4	12	1	92	497
8	9·1	22	2	84	764
9	3·8	9	1	42	160
10	19·4	47	2	79	1,533
		Mean number of eggs per plant			693·4

The planting distance was 4 ft. × 20 inches which gives 6,534 plants per ac on this assumption it is possible there were as many as 4,500,000 eggs on o acre of cotton each being a potential cotton worm. In some cases caterpillars l defoliated fields to pupate, but possibly also in search of food, in such numbers th a person could not rest in the shade of some trees without the insects falli on ones clothing ; they even entered houses and were a nuisance, and died in nu bers sufficiently great to create distinctly offensive odours. In spite of what h been said about moth invasions there is little doubt that the numbers were au mented by insects which completed their life-history in St. Vincent. In additi to the ordinary cotton worm, some of the lesser cotton worms (*Aletia luridа*, Gue attacked the crop, in January 1927 ; this attack was light and did not develo The numbers were not great, and the point is perhaps only of academic interest.

The life-history of Alabama when worked out was as follows, egg 3 day larva 14 to 17 days, pupa 6 to 8 days. The life cycle from the egg to the adu being from 23 to 28 days. The supply of insecticides in the island was soo depleted, the emergency supply kept by the Agricultural Department was 494½ l of Paris Green and 105 lb. of Arsenate of Lead. Importations were made fro Barbados until all in that island was obtained ; a small consignment of 200 lb. w supplied by Grenada. It would appear as though final control of the pest w primarily due to parasites, in which Trichogramma played the major part. It estimated that between 500,000 and 600,000 lb. of mixed insecticide were use for control purposes.

If activity is displayed in the early stages of an attack of cotton worms an dusting is done immediately no considerable damage ensues, but it is not muc good one man dusting if his neighbour does not do likewise. As with many othe

pests the secret of successful control is early application of insecticides done on a community basis. Arsenical insecticides should be kept by planters on estates, and regarded as an insurance policy. It is useless attempting to control a heavy infestation of worms by means of picking, many thousands of worms escape the most careful picker on account of their miniature size in the early stages of their existence.

As regards damage done to the crop by this pest, this was variable. In some cases the plants were wholly defoliated and when this occurred on thin land or on land of indifferent fertility they died. In some instances the plants were not given a chance to recover, they were pulled up by the owners and other crops planted.

Taking all facts into consideration the attacks of cotton worms experienced probably accounted for a reduction of some 40 to 50 per cent in yield.

The Pink Bollworm (*Platyedra gossypiella*).

The pink bollworm did little damage to the cotton crop except perhaps in two localities. One of the instances cited is the island of Bequia and another an estate in the southern district of St. Vincent. In the Southern Grenadines this pest did little or no damage, although the cotton grown in these islands is a perennial one. A period of protracted drought accompanied by hot sunshine was experienced in these islands during boll ripening period and harvesting, a set of conditions not at all conducive to the rapid increase or the general well being of this pest. The reasons for large numbers being found in the cotton at Bequia have already been given in the previous Report on the work of this Department, and as these still hold good they are not worthy of repetition. It is difficult to account for the somewhat serious attack of this pest on the estate in St. Vincent. It was probably due to some stupid action by labourers, unknown to the owner. Possibly some infected cotton seed or seed cotton was thrown on to waste land or in bush or scrub. Such an action when seen on paper appears most trivial but actions of a similar nature have had far reaching effects in this island.

Soon after the appearance of the pest in 1923, when control measures were being considered, the Agricultural Superintendent in an interview with members of the St. Vincent Chamber of Agriculture and Commerce, stated that the best method of controlling the pest when in cotton seed was by means of heat. Attached to the plant at the Government Cotton Ginnery is a Hess Corn Drier and it was then thought that this piece of machinery could be used for the two-fold purpose of drying corn and controlling the pink bollworm in cotton seed. It was found, however, to be unsuitable for this purpose, and resort to control by fumigation with carbon bisulphide had to be made. Late in 1926, Mr. Evans, Acting Principal Imperial College of Tropical Agriculture, attended a meeting of the above mentioned Chamber and at this he recommended the purchase of a heater which is specially designed for the control of pink bollworm in cotton seed and manufactured by Messrs. R. Simons and Sons, Nottingham, England. This piece of machinery was ordered by cable and will be erected at the Government Ginnery in the near future. It is hoped to give a full description of this in a subsequent Report.

To give some idea of the rapidity in which pink bollworm increases figures from an observation plot of cotton growing at the Experiment Station were obtained. The following gives the result of the observations:—

November	11th.	3	per cent of bolls affected.
,,	25th.	10	,, ,, ,, ,,
December	2nd.	16	,, ,, ,, ,,
,,	7th.	50	,, ,, ,, ,,
,,	16th.	69	,, ,, ,, ,,
,,	23rd.	100	,, ,, ,, ,,
,,	30th.	100	,, ,, ,, ,,

Early in January the cotton at the Experiment Station was so badly infested by this pest that the destruction of the plants was commenced. It might be said

that any person who had no experience of pink bollworm would have considered this destruction a piece of vandalism as the plants were covered with healthy foliage and were bearing large numbers of flowers and immature bolls.

An attempt was made during the year to form some opinion as to the number of double seeds in cotton seed at the Ginnery, insects in such positions have a much better chance of escaping the effects of fumigation than others less favourably placed. The counting was done each week and moderately large quantities were handled. The following gives the result :—

Month.	Quantity of seed examined. lb.	No. of double seeds.	Calculated No. of double seeds per ton.
January ...	1,404	609	971
February ...	3,412	4,783	3,150
March ...	3,166	3,137	2,219
April ...	2,107	1,959	2,089

With reference to the above it might be said that there are approximately between 4,200 and 4,600 seeds to one pound, or approximately 10,000,000 to a ton.

During the year a mite predacious on pink bollworm was found in seed at the Government Cotton Ginnery; this is Pediculoides, possibly the pot-bellied mite louse. The decreasing numbers of infested seed during March and April was possibly due to activity of this insect, it might be said that 9·5 per cent of pink bollworm found in cotton seed during the month of March were parasitised by it.

The Cotton Stainer (*Dysdercus delauneyi.*)

On the whole this pest was well controlled during the year, and it can be said that with one or two exceptions the numbers were so small as to be negligible. The exceptions referred to were in a field of arrowroot where cotton seed meal had been broadcasted, the other in a field of cotton where disintegrated cotton seed had been applied and was not thoroughly covered. The control of this pest in the arrowroot took about six weeks, that in the cotton about a fortnight. Control measures were carried out on the same lines as those adopted in previous years, and the work was under an Officer of the Agricultural Department. These instances are cited to show how, even at this juncture, planters are apt to do the wrong thing. Only one person failed to observe the Close Season. This individual had two or three acres under cotton growing in a locality quite close to Kingstown. A charge was brought against the man and labourers were engaged by the Agricultural Department to clean up the field, and the owner had to pay the costs.

In the following table the number of stainers accounted for at the Experiment Station are given. The method employed in computing the figures has been put forward in a previous Report and it is not proposed to do so in this publication.

Months.	1922.	1923.	1924.	1925.	1926.
January ...	135,909	37,878	20,086	1,449	2,850
February ...	548,400	63,800	2,800	7,723	0
[illegible] ...	129,660	51,880	930	6,231	791
[illegible] ...	40,760	3,002	1,225	2,400	5,136
[illegible] ...	6,100	817	52	716	100
[illegible] ...	3,693	908	—	—	—
[illegible]y ...	230	550	—	—	—
August ...	209	87	—	1	—
September ...	88	3	—	1	—
October ...	89	8	—	—	—
November ...	210	—	—	—	—
December ...	900	377	57	550	—

The above figures require no comment.

The campaign carried out during the past season was on the same lines as on evious ones. It consisted of :—

a. The enforcing of a close season.

b. The trapping of the pest when found in numbers.

c. The destruction of food plants.

In the enforcing of a close season which during 1926 extended from April 1st May 31st, the object aimed at was to visit and inspect every field in which otton was grown. As in previous years the island was divided into sections nd an Agricultural Officer made responsible for the carrying out of the law and r controlling the pest when found in numbers. It might be said that the clean- g up of fields was, on the whole, well done, but it was done more carefully nd more thoroughly in the Leeward District than it was in the Windward.

Towards the end of the season a thorough search was made for Silk Cotton ees (*Eriodendron anfractuosum*, *D.C.*) and some two hundred and sixty-nine ere found ; these were either pruned back or felled. The number seems large ut a high proportion of them were plants that had already received attention in he past and since had made new growth. Two were found whose presence were ot known previously. Large specimens of this tree which grow in positions here it is difficult or dangerous to cut them down can be killed by stripping off a and of bark from around the tree some eight or more inches wide, and applying the wound a preparation known as "Atlas Wood Preservative." Some of hese trees have large buttresses and it is as well to make the wound above these, nd the work should be done if possible in dry weather.

Red Ring of Coco-nuts (*Aphelenchus cocophilus*).

This disease is not making any progress in St. Vincent. On one large estate our men are employed whose sole duties are to go over the estate searching for rees possibly infected, isolated instances are sometimes met with which receive rompt treatment. At the present moment the only known method of control is omplete destruction of the tree by fire. It is reasonable to assume that the land round a coco-nut tree that is attacked by this disease is full of the nematodes hich caused it, and the only way to prevent their spreading through the soil is y means of trenches, to isolate each tree and each group of trees growing adjacent the one attacked. It will be seen that the control measures are drastic and omewhat expensive to carry out, but at present they are the only ones known. Ve have experienced a series of dry years and the disease has made no progress; hat will happen if a series of wet ones eventuate, one cannot say.

Arrowroot Worm (*Calpodes ethlius*).

This pest attacked arrowroot plants very severely during the year. Some elds were quite defoliated by it. As stated previously some planters do not egard this as a pest that causes decreased returns, but the wholesale destruction f foliage which took place in 1926 must have caused loss. It is peculiar that ome estates are seldom attacked by this worm, and it is quite noticeable that fields n wind swept situations suffer most. It is well known that the eggs of the rrowroot worm are parasitised by Trichogramma and it is quite possible that this nsect prefers sheltered positions to wind swept ones.

Other Pests.

Cotton.

Bush Bugs (*Nezara viridula*) were moderately common, but did not cause any naterial damage to crops. It might be said that these insects are not nearly so ommon in the island as they were two or three years ago.

The Bronze Beetle (*Colaspis fastidiosa*) caused damage in some places during the early part of the season, and on this account it was difficult to get some few fields of cotton properly established.

Soft rot was present and as in every year, caused loss. The fungus (*Sclerotium rolfsii,*) was moderately common in some few badly drained places, and West Indian Leaf Mildew (*Ovulariopsis gossypii*) was common towards the end of the season.

Black Scale (*Saissetia nigra,*) White Scale (*Hemichionaspis minor*) Leaf Blister Mite (*Eriophyes gossypii*) were all present towards the period under report They were, however, not responsible for damage.

Sugar-Cane.

Root disease (*Marasmius sacchari*) was commonly found in cane fields, this is much more pronounced in plants growing in soil of indifferent fertility than those in land in good heart.

Rind fungus (*Melonconium sacchari*) and Pine-apple disease (*Thielaviopsis paradoxa*) were both noticed in cane fields.

The Moth Borer, (*Diatrea saccharalis*) the Weevil Borer (*Sphenophorus sericeus*) and Mealy Bug were present, but apparently were not responsible for much damage.

Cacao.

Phytophthora rot of pods was fairly common. Thrips (*Heliothrips rubrocinctus*) were present. It is probable, however, that rats are responsible for as much damage to cacao as the previously mentioned pests.

Coco-Nuts.

The Palm Weevil (*Rhynocphorus palmarum*), White Fly (*Aleyrodicus cocois*) and scale insects, (*Aspidiotus destructor*) were found on coco-nut palms.

General.

The corn ear worm (*Laphygma frugiperda*) was moderately common. Other pests were found on certain plants but the damage done by them was not sufficiently great to warrant discussion.

PLANT AND ANIMAL LEGISLATION ENACTED DURING THE YEAR 1926.

On February 16th an Order in Council was Gazetted, in which the months of April and May were declared to constitute a Close Season for cotton.

LAND SETTLEMENT.

The usual crops were planted but there was an increase in the area planted under cotton. This was particularly unfortunate as the plants growing on many plots were badly attacked by cotton worm. Many of the peasants did not wait to see whether their cotton crop would recover or not. They pulled it up and planted something else. On the other hand peasants in the Southern Grenadines made a bumper Marie Galante crop. The cotton in these islands was not attacked by worms.

EXPERIMENT STATION, UNION ISLAND.

Cotton Selection.

Figures dealing with this work will be found in another section of this Report.

Rainfall.

The following gives the monthly rainfall as measured in Union Island during 26. The readings were taken by the District Officer, Southern Grenadines.

Month.	Rainfall.
January	3·06
February	1·43
March	·70
April	·05
May	·23
June	1·17
July	2·75
August	3·11
September	2·48
October	5·61
November	5·67
December	·55
Total inches	26·81

Miscellaneous.

Manurial experiments were continued with Marie Galante cotton, but at the me of writing results have not been received. Onion seeds were imported and nt to Union Island on two occasions during the year, but were a failure; this as due to drought conditions. Sorrel and other crops were grown.

PROGRESS IN CHIEF INDUSTRIES.

Cotton Industry.

The area under cotton in St. Vincent and the St. Vincent Grenadines during he year under review amounted to 7,457 acres. Of this 6,156 acres were under ea Island and 1,300 acres under Marie Galante.

Following the procedure adopted in previous years the appended tables are iven. They indicate the number of peasants and estate growers of cotton in the olony and the area under this crop for the season 1926-27 and, for the sake of omparison, similar information for the season 1925-26.

Table 1.

1925–26.

		Sea Island. Acres.	Marie Galante. Acres.
1,909 Peasants, St. Vincent	...	1,865	
309 ,, Bequia	...	301	
251 ,, Union Island	...		673
45 ,, Canouan	...		83
1 ,, Mayreau	...		1
2,515 Peasants	...	2,167	759
46 Estates, St. Vincent	...	2,674	
4 ,, Grenadines	...	147	600
50		4,989	1,359

TABLE 2.

1926–27.

			Sea Island. Acres.	Marie Galante. Acres.
2,742	Peasants, St. Vincent	...	2,795	
313	,, Bequia	...	292	
			3,088	
263	,, Union Island	...		725
42	,, Canouan	...		75
3,360				
53	Estates, St. Vincent	....	3,068	
2	,, Grenadines	...		500
55			6,156	1,300

It will be seen that there was a considerable increase in the area planted unde Sea Island cotton during the past season when compared with that planted durin the previous one, in fact the area has only once been exceeded *i.e.*, in 1920–2 when some 6,453 acres were under the crop. In addition there was a correspond ingly large increase in the number of peasants growing this type of cotto During 1925–26 there were 2,515 and during the season under review there wer no less than 3,360, an increase of some 855. The figures dealing with Mar Galante cotton do not show the same fluctuations. It is quite probable that th areas returned as being under Marie Galante in the Southern Grenadines are muc exaggerated. The remark does not perhaps, hold good for Union Island.

During the early months of the cotton season, the crop looked most promising more promising than it has looked at that period for many years. A considerabl amount of care had been taken in the cultivation and preparation of the so and more organic manure had been put in the land than for many year Everything pointed to a record crop. In one or two places some difficulty had bee experienced in getting the crop established on account of Bronze Beetle (*Colasp fastidiosa*) attacks, and the presence of Sclerotium fungus; these, however, wer perhaps on the whole, less prevalent than is usually the case. The season whic opened in a most promising manner met with disaster, caused by repeated attack of caterpillars. This would not have occurred if control measures had been applie as soon as the insects were noticed in fields. As will be seen by the above man peasants grew this crop and in some cases they were willing to dust with arsenica but did not have the money to purchase them.

The question of attacks of cotton worms is discussed in another section of thi Report, but before leaving it altogether a word might be said about insecticide The most popular insecticide used in the West Indies for the control of this pes is Paris Green. Fairly recently Calcium Arsenate has been successfully used i the United States as an insecticide for cotton pests. As this insecticide is cheapc than the other mentioned it probably will be used in St. Vincent in the future It has been found by the United States Bureau of Standards that this insecticid when thrown in a dust cloud from a rapidly moving aeroplane adheres to the plan when dry, but it does not do so when thrown upon the plant in the middle of th day from horse drawn or hand machines. This is possibly a question of electrif cation of the particles when thrown from the plane. The reason at this junctur does not concern us very much, but the fact is one that should be noted by planters

The yield of Sea Island cotton for the season 1926–27 was 507,240lb. of lin This works out at 82lb. per acre. Comparing these figures with the average re

n for the previous four years, which works out at a little more than 139 lb., y show a decrease of 57lb. of lint per acre. This can be put down to one cause— ton caterpillars. The monetary loss caused by this pest must be in the vicinity between £20,000 and £30,000.

In the following table the areas planted for the past decade are given, with return per acre, etc.

Table III.

Crops.	Area planted, acres.	Weight of lint, lb.	Weight of lint per acre, lb.
1917-18	3,458	329,115	95
1918-19	4,588	437,273	95·4
1919-20	5,079	475,650	93
1920-21	6,453	614,508	95
1921-22	2,907	278,744	93
1922-23	3,562	575,640	161·6
1923-24	3,387	473,248	139·7
1924-25	3,294	449,295	136·5
1925-26	4,893	585,483	119·7
1926-27	6,156	507,240	82

The average yield per acre for the past ten years works out at 111 lb.

Following the procedure adopted in previous years the annexed (Table IV) s been compiled. It shows the amount of Sea Island cotton exported for the iod indicated:—

Table IV.

Years.	Export of lint, lb.
1916-17	99,688
1917-18	427,273
1919	484,097
1920	494,871
1921	502,308
1922	338,279
1923	585,143
1924	520,369
1925	473,219
1926	588,793

The Sea Island cotton exported during 1926 was valued at £63,158.

In addition to the above 30,275 lb. of lint of Marie Galante cotton were pped to the United Kingdom and 56,092 lb. seed cotton to Grenada. Assuming at the seed cotton shipped to Grenada gave 25% of lint, we may assume that the op of Marie Galante cotton in the Southern Grenadines amounted to some 44,298 of lint. The Marie Galante cotton was valued at £1,982.

Seed Supply.

For the past fifteen or twenty years the growing of Sea Island cotton has eupied a dominating position in St. Vincent agriculture. This island has been rticularly fortunate in that it has had a Research Officer stationed in it for a mber of years. Such an officer has laid a foundation on which to build a fabric ich places the cotton industry not only in a position of dominance but also one soundness. One result of such an officer being stationed in St. Vincent is that have evolved several pure strains of cotton of which we possess data from the wing of the seed right up to the final production of yarn. It is from two of ese strains that the supply of seed for general planting purpose is obtained.

In a "Report on the Maintenance and Improvement of the Quality of Egyptian Cotton" written by Dr. H. Martin Leake some time ago, he puts forward the following scheme for such work in tabular form as follows :—

1. Research : The isolation of races in a condition of purity.
2. Experimental Trial : Small cultures grown comparatively under different environmental conditions.
3. Field trials : The bulk development of a pure seed supply.
4. Seed distribution : The organization of a seed supply sufficient to meet the full needs of the tract.

Of the above, 1 and 2 at this juncture require little discussion, types have been isolated and grown sufficiently long to leave little or no doubt as to any inherent environmental effects. 3 and 4 will, however, be discussed, but before doing so a word might be said about the strains selected for general planting purposes. During 1923-24 extensive trials including spinning tests were made with various pure strains. Upon the receipt of the results it was decided by the Research Officer and the Agricultural Superintendent that the type known as B.D. should be used for general planting and the V. 135 type for planters growing extra superfine.

The strain B.D. is a cotton which may be regarded as a good yielder, a factor which the grower is primarily concerned with. The number of flowers that this strain produces is not high, but the percentage of sheds to flowers produced is low. It has a large percentage of four-lock bolls, which gives it a high weight of lint per boll. The ginning out-turn is moderately high, being some 28 per cent. It has a maximum lint length of 51·0 mm. In the spinning tests the scutcher losses were low. V. 135 is possibly one of the longest and finest cottons in the West Indies. The highest prices are obtained for this when put on the market. This remark possibly applies only to one estate in the island which produces it pure, in bulk. This strain forms more flowers than any other but the number of bolls produced are low, it sheds about 32·7 per cent of its flowers. It has a low ginning out-turn of about 24·5 per cent and the amount of lint per boll is small. The strain is valuable on account of its lint length, it being some 57 mm. long. In spinning tests it was stated that the staple was too long to work alongside the others in preparation. The statement was also made that the strain was rather wasty.

In 1924-25 it was decided to work up a bulk lot of pure seed of the strain B.D. and an increased quantity of pure strain seed of V. 135. In 1925-26 50 lb. of the former mentioned strain were raised and handed to an estate owner who grew it separately from other cottons, kept it separately in cotton houses and ginned it separately. From this seed some 60 acres were planted in 1926-27. This should give sufficient seed for planting some 2,000 acres during the coming season. For the season 1927-28 about some 500 lb. of pure B.D. seed is available at the Experiment Station, and will be handed to the owner of the estate mentioned above. Therefore, if nothing untoward happens, in 1927-28 there will be some 100 acres of cotton of pure B.D. strain in St. Vincent which will give quite sufficient seed to meet any local demand; this will be at the disposal of the Agricultural Department. It is proposed that in each year sufficient pure seed of this type will be available to establish the cotton crop on the estate in question. This is owned by the Honourable A. Punnett, and the thanks of the Department are due to him for his hearty co-operation in this work.

In connection with the strain V.135, a somewhat different procedure has to be adopted. Estates growing this cotton are given, and will be given, seed to establish a nursery of pure strain seed of some ten acres, and from this the estate crop will be established during the succeeding year. When this is done annually, and the necessary care exercised, the purity of estate extra superfine will be assured.

With reference to the question of the obtaining of land on which to grow cotton to ensure the annual provision of supplies of pure seed as mentioned above, it should be said that St. C. McConnie, Esquire, placed a field belonging to him at the disposal of the Department. This is situated quite close to the Experiment

ation, which makes it convenient for the work of self fertilizing flowers, tabbing, aping, etc. All these operations are supervised by an Agricultural Officer, the nning of the seed cotton is also under the supervision of the Department.

In conclusion a word might be said about actual distribution of seed for r general planting purposes. It is as follows :—

1. The question as to which strain of seed should be used is referred to the gricultural Superintendent.

2. Seed cotton, the seed of which is to be used for planting purposes, is ginned parately, care being taken that the gins and shoots are free from seed before erations are commenced.

3. After ginning the seed is placed in marked bags and put in a room by emselves.

4. The seed is purchased at a slightly higher rate than current market value.

5. All immature or crushed seeds are picked out.

6. In addition to the treatment for the control of pink bollworm the seed is sinfected with corrosive sublimate before it is sold.

7. Seed is sold from the Government Ginnery.

Cacao Industry.

The amount of cacao exported during 1926 was the largest since 1919, the uantity being 174,599 lb. It has often been said that manuring is indispensable to very cultivation, but with one or two exceptions this crop in St. Vincent gets very tle. It should not be forgotten that certain elements necessary to fertility are ken away from the soil annually by the crop, and if it were not for the fact at every year a part of the dormant, or non-available plant food is converted into vailable food by means of atmospheric and other influences, the condition of a reat deal of the soil in which cacao is growing would probably become unproductive in a comparatively short period of time. To obtain anything like maximum ields this converted plant food must be supplemented by manure. Results btained in this island plainly indicate that farm-yard manure, and compost anure or almost any organic manure is sadly wanted in the soil, if these are ghtly covered with soil when applied so much the better. If they cannot be overed then they should be used as a mulch. In the past the poor price ruling r this commodity has led some individuals to neglect cacao plantations, but now at better prices are ruling it would probably pay to give orchards more attention. here is little doubt that the liberal use of organic manures would go far towards nproving the general well-being of many cacao trees growing in this island. However, in some parts of St. Vincent some cacao trees are merely existing on a few ches of surface soil. It is hopeless to expect trees on this type of land to thrive.

The following list gives the amount of cacao exported for the past decade.

Year.	Weight lb.
1917	133,391
1918	207,507
1919	219,545
1920	168,594
1921	139,135
1922	137,349
1923	121,374
1924	138,910
1925	154,821
1926	174,599

According to Treasury figures the cacao exported was valued at £2,461 or at e rate of 3·3d per lb.

Starch Industry.

The price ruling for arrowroot during the year has on the whole been fair.

However, towards the end of the year there was a large quantity unsold in Eng land. It would seem, however, that this position will correct itself. The tot exports for 1926 amounted to 3,291,553 lb. Of this quantity 1,739,054 lb. we sent to England, which works out roughly at 50 per cent. For the ten yea previous to 1926, the quantity shipped to the United Kingdom was some 66 p cent of the total. The amount of arrowroot shipped to the United States durin 1926 was 914,379 lb. against 649,977 lb. shipped to that country in 1925, *i.e.*, a increase of 274,402 lb. This increase is remarkable when it is considered that th average exports to that country for ten years previous to 1925, only amounted t 189,806 lb. The next best customer for this commodity was Barbados whic absorbed 244,916 lb., this was followed by Canada which imported 225,949 lb Intercolonial markets and Holland absorbed the remainder. It may be stated tha 22,621 lb. was shipped to Holland; this quantity being a little more than twice a much as that country took in 1925. These figures almost unmistakably indicat that markets are being found, other than those of the United Kingdom, which ar absorbing increasing quantities of an article peculiar to St. Vincent and one o which the prosperity of the island depends so very much. It would seem a though a problem which was perturbing to all who had the interest of this islan at heart, is solving itself.

The quantity of cassava starch exported was 443,075 lb., valued at £4,078 Practically all of this was shipped to intercolonial markets, a small quantity, how ever, was sent to England and the United States.

The following table gives the exports of arrowroot and cassava starch for th past ten years, the values are also given:—

Year.	Arrowroot lb.	Value. £	Cassava. lb.	Value. £
1917	4,737,584	40,296	218,390	1,420
1918	5,084,262	95,828	332,227	3,831
1919	2,244,276	42,222	430,415	4,836
1920	2,794,532	52,771	343,309	3,844
1921	2,093,358	21,216	156,888	1,666
1922	3,627,401	26,141	155,521	1,482
1923	2,177,182	31,829	366,085	3,700
1924	2,952,535	51,361	634,631	6,838
1925	3,189,740	125,068	470,284	4,160
1926	3,291,553	45,807	433,075	4,077

According to Customs returns the arrowroot exported was valued at £45,807

Syrup Industry.

A record crop of syrup was obtained during 1926, but the prices were lo When such prices rule there often is an outcry for the substitution of sug manufacture for that of syrup. The fact, that speaking broadly, the price f syrup is sympathetic with that of sugar, is often lost sight of. During 1926 it very doubtful if the manufacturers of sugar were in any better positions than th men who converted their cane crop into syrup. At the present time sugar manu facturing is work for specialists and men trained in various sciences are often co sulted in connection with obscure problems. Apart from overhead expenses, th initial cost of putting up machinery and buildings is very high, and if one co siders the cost of transporting canes from the fields to any large factory in suc an island as this, either by railway or other mechanical means, the outlay woul more than probably be prohibitive. On the other hand syrup is manufactured i a very simple manner with inexpensive machinery, and if certain rules are observe serious complications are seldom met with; last, but perhaps not least, the cost manufacture is low.

In the Report on the Agricultural Department for 1925 certain experiment in connection with the use of invertase as a preventative of crystallization an

ntation of syrup were mentioned. The details of the experiments were given
e publication previously mentioned so it would not be necessary to repeat
again. They were started some twenty-four months ago and when the last
e was opened the contents were in a condition similar to that when originally
p. These experiments suggest the fact that a supply of syrup can be kept
ghout the year to supply local and other West Indian demands without any
of it deteriorating. Trial shipments of syrup treated with invertase will, in
ear future, be made to the United Kingdom. Our syrup might be pushed in
market as a pure food product rich in vitamin B This vitamin is known as
nti-neuritic vitamin and is commonly found in yeast, a deficiency of this in
causes diseases of a nervous order in human beings such as berri berri.
The export of sugar and syrup for the past ten years is given below.

Year.	Sugar lb.	Value £	Syrup Gallons.	Value £	Total Value. £
1917 ...	1,264,201	11,584	81,114	3,102	14,686
1918 ...	316,640	3,295	79,834	4,796	8,093
1919 ...	250	3	170,482	10,722	10,725
1920 ...	...	...	185,999	27,828	27,828
1921 ...	322,560	3,514	117,157	9,878	13,392
1922 ...	150,080	1,264	134,784	9,862	11,126
1923 ...	145,944	1,863	275,932	18,711	20,574
1924 ...	22,400	280	261,127	15,758	16,038
1925 ...	...	...	268,118	19,672	19,672
1926 ...	...	...	337,099	16,523	16,523

In former Reports the practice was adopted of converting sugar exported into
s of syrup. It being estimated that 300 gallons of syrup are equivalent to
on of sugar. This has been done below, but in addition syrup has been
ted on the same basis into terms of sugar.

Year.	Syrup, gallons.	Sugar, tons.
1917	250,314	834
1918	122,134	407
1919	170,512	568
1920	185,999	619
1921	160,357	534
1922	154,884	516
1923	295,432	984
1924	264,127	880
1925	368,118	1,220
1926	337,099	1,123

The quantity of syrup exported is in excess of that exported in any one year
ng the past ten years. According to Treasury returns this was valued at
523 or at the rate of approximately 11½d. per gallon.

PROGRESS IN MINOR INDUSTRIES.

Indian Corn (Maize).

The quantity of corn exported from St. Vincent during 1926 was much less
in any one of the previous three years. The reason for this was perhaps due
e failure of the maize crop in the Southern Grenadines, which was due to
ght. Corn is one of the staple foods for the people in the islands mentioned
when the crop fails, or is a short one, the deficiency is made up by importations
St. Vincent and other places. This influences export figures. St. Vincent
ts Dependencies differ from some other West Indian islands in that the

majority of the corn not exported is used for human consumption and not stock feeding purposes. There is a considerable lack of variety when this ar is used as a food for human beings. This should not be so when one consi that corn can be used for porridge, pancakes, muffins, bread, vegetable, cust cakes, and even in soups and for sweets. However, this is not the place in w to discuss this point at length.

In the following table figures are given for the export of maize for the y 1917-26 :—

Year.	Export, bushels.
1917	2,855
1918	3,037
1919	1,327
1920	2,428
1921	1,683
1922	581
1923	4,696
1924	2,766
1925	2,754
1926	1,751

The corn exported was valued at £388.

Coco-Nuts.

The rapidity with which the coco-nut industry is increasing is reflected in table of exports given below. In the Report on this Department for last y the remark was made that "increased exports of copra may be expected with fair amount of confidence in the coming year." The figures as put forward jus this.

The annual increase in area during the past few years has been somewhere the neighbourhood of 200 acres. By this remark it is meant that this area is la that is suitable for this crop and one in which it will thrive. Unfortunately, addition to this, areas have been planted in land of very indifferent fertility, as steep hill-sides, where the crop will stand a poor chance of doing well. There no doubt that large areas would have been planted in this crop if planters w not frightened of the destructive effect of hurricanes. However, it is seld or never that the sound trunk of a coco-nut palm is broken by wind or a tree rooted. If uprooting takes place it is more often due to the action of water or combination of both. Severe storms set the trees back, they destroy part of crop in sight and damage leaves. Storms also may furnish conditions for entrance of beetles, and in this way do injury. The damage that may be done coco-nut palms by storms can easily be overrated.

A useful purpose might be served if a note on the harvesting of coco-nuts put forward. It is assumed that the nuts are required for the production of co Copra in its turn is sooner or later used for the manufacture of oil, and to prod the greatest quantity and best quality of this the nuts must be absolutely ri Ripeness is reached when the husk has become shrunken, and the meat thorough hard, and when the whole is shaken the water inside will make a sharp spl against the meat. It should be remembered that the nut decreases in weight a size for about two months before it is ripe, and throughout this shrinking proc there is an increase in the content of oil. In addition, as the husk grows tough the shell hardens and the nut becomes much lighter and is not likely to beco broken when it falls to the ground. The best way to harvest the nuts is to all them to ripen and fall naturally from the tree. This does not apply to nuts the seed bed. At times nuts have to be cut down, as when they germinate on t tree ; this is a bad characteristic of rare trees and nuts from them should never used for the seed bed.

The following table gives the exports of copra and coco-nuts since 1918:—

Year.	Quantity.			Value.	
1918	Coco-nuts	5,723		£ 22	£211
	Copra	7,104	lb.	189	
1919	Coco-nuts	7,000		47	£203
	Copra	9,319	lb.	156	
1920	Coco-nuts	16,448		144	£574
	Copra	22,644	lb.	430	
1921	Coco-nuts	13,339		82	£1,431
	Copra	89,005	lb.	1,353	
1922	Coco-nuts	770		£6. 4s. 2d.	£2,440 17 0
	Copra	223,593	lb.	£2,343. 13s. 10d.	
1923	Copra	356,626	lb.		£2,959
1924	Coco-nuts	4,841		£ 22	£5,452
	Copra	645,973	lb.	5,430	
1925	Coco-nuts	9,435		20	£5,532
	Copra	661,309	lb.	5,512	
1926	Coco-nuts	20,463		102	£9,928
	Copra	762,563	lb.	9,826	

Ground-nuts.

The quantity of ground-nuts exported amounted to 190,978 lb., or 3,673 bushels. These were valued by the Customs authorities at £2,370 or at a little less than 3d. per pound. The following table gives the quantity exported for the past decade:—

Year.	Export, bushels.
1917	14,424
1918	13,489
1919	11,329
1920	12,017
1921	5,584
1922	8,336
1923	8,803
1924	6,195
1925	5,251
1926	3,673

Peas and Beans.

There was a considerable decrease in the quantity of peas and beans exported during the year. This is readily seen at a glance at the following table which gives the exports for ten years.

Year.	Export Bushels.	Value, £
1917	4,551	1,492
1918	3,361	1,666
1919	2,704	1,392
1920	1,581	952
1921	2,637	1,472
1922	2,731	1,640
1923	2,482	1,595
1924	1,744	984
1925	1,548	866
1926	965	476

Barbados was our best customer for the peas and beans. 44,680 lb. being exported to that island.

Miscellaneous.

The value of miscellaneous agricultural products exported and not previously dealt with, is as follows:—Vegetables £2,100, nutmegs £832, poultry, game and eggs £519, cotton seed £398, mace £320, fruit £148, ginger £13, cotton linters £17, limes and lime juice £3.

Rum Industry.

No rum was exported; 28,286 proof gallons were distilled. This is worth £3,536, valued at 2/6 per gallon.

Oils.

Five thousand one hundred and eighty gallons of cotton seed oil valued at £583 were exported. Large quantities of this oil are refined and used locally for domestic purposes. In addition 1,964 gallons of whale oil valued at £148 were sent from the Colony.

AGRICULTURAL INSTRUCTION, EDUCATION AND CO-OPERATION.

The number of Agricultural Credit Societies in the Colony is twenty-one, some of which did not function during the year.

Agricultural Officers paid frequent visits to estates and peasant holdings throughout the Colony.

Three leaflets were written by the Agricultural Superintendent, these were—"Notes on the House-fly", "Preparation of Seed Cotton" and "The Cotton Caterpillar." A total of 540 of these were distributed.

Science Teaching.

This work is done by the Science Master attached to the Grammar School.

Details of Staff and Administration.

The sum of £1,667 was voted for the upkeep of the Agricultural Department. The following gives details of expenditure: –

	£	s.	d.
Salary, horse and travelling allowance, Agricultural Superintendent	450	0	0
Salaries, Foremen, Botanic and Experiment Stations, Cotton Inspector, Officer in Training and Clerical Assistant, and horse and travelling allowances, Agricultural Instructor and Cotton Inspector ...	509	7	9
Upkeep Botanic and Experiment Stations, (labour, tools, manures, etc.)	572	19	4
Destruction of food plants of the Cotton Stainer ...	18	1	7
Salary, horse and travelling allowance, Government Vaccinating Officer	20	0	0
Other charges Government Veterinary Department	12	0	0
Special Cotton Investigations	10	0	0
Total	1,592	8	8

Receipts.

The receipt for sales of plants and produce at the Botanic and Experiment Stations amounted to £82. 7s. 11d. The total receipts were £124. 14s. 4d. Of this latter amount £42 was for repayment of advances.

STAFF CHANGES, ETC.

No staff changes took place during the year.

RESPONDENCE AND DISTRIBUTION OF INFORMATION OF AGRICULTURAL MATTERS.

The number of minute papers dealt with during the year amounted to 149, the number of letters despatched was 636.

In addition to the leaflets already mentioned 200 copies of the Report on the ricultural Department were distributed.

ADDITIONS TO LIBRARY.

Apart from publications received from British West Indian Departments of riculture the following were received :—

Records, Brooklyn Botanic Gardens ; Seasonable Hints, Department of Agriture, Ottawa ; Kew Bulletin ; The Tropical Agriculturist ; The Cotton Gazette ; nual Report, Department of Agriculture, Mauritius; Review of Applied Mytogy ; Journal of Agricultural Research ; The Philippine Agricultural Review ; periment Station Record ; Bulletin of Imperial Institute ; Journal of the Departnt of Agriculture, British Guiana ; Review of Applied Entomology ; Bulletin, partment of Agriculture, Mauritius; Extension Notes, Porto Rico Department Agriculture ; Journal of Genetics ; Bulletin, Department of Agriculture, Ceylon ; e Empire Cotton Growing Review; Pamphlets, Agricultural Experiment tion, Cornell University ; Report, Agricultural Department, Nigeria ; Report, gricultural Department, Gold Coast ; Report on the Lands and Forest Departent, Sierra Leone ; Report, Agricultural Department, Gambia ; Annual Report, rest Department, British Honduras; Notes on Royal Botanic Gardens, Edinburgh ; e Gardens Bulletin, Straits Settlements ; Tropical Life; Report of the Minister Agriculture, South Australia ; Report, Rothamsted Experimental Station ; Rert, British Cotton Growing Association ; Climatological Data, Porto Rico ; mphlets, Ceylon Department of Agriculture ; Commercial Review, British iana ; Pamphlets, Department of Agriculture, Federated Malay States.

METEOROLOGICAL OBSERVATIONS.

The average rainfall at the Botanic Gardens for the past 33 years was 101·23 ches. Therefore the rainfall experienced during 1926 was 22·37 inches below e average.

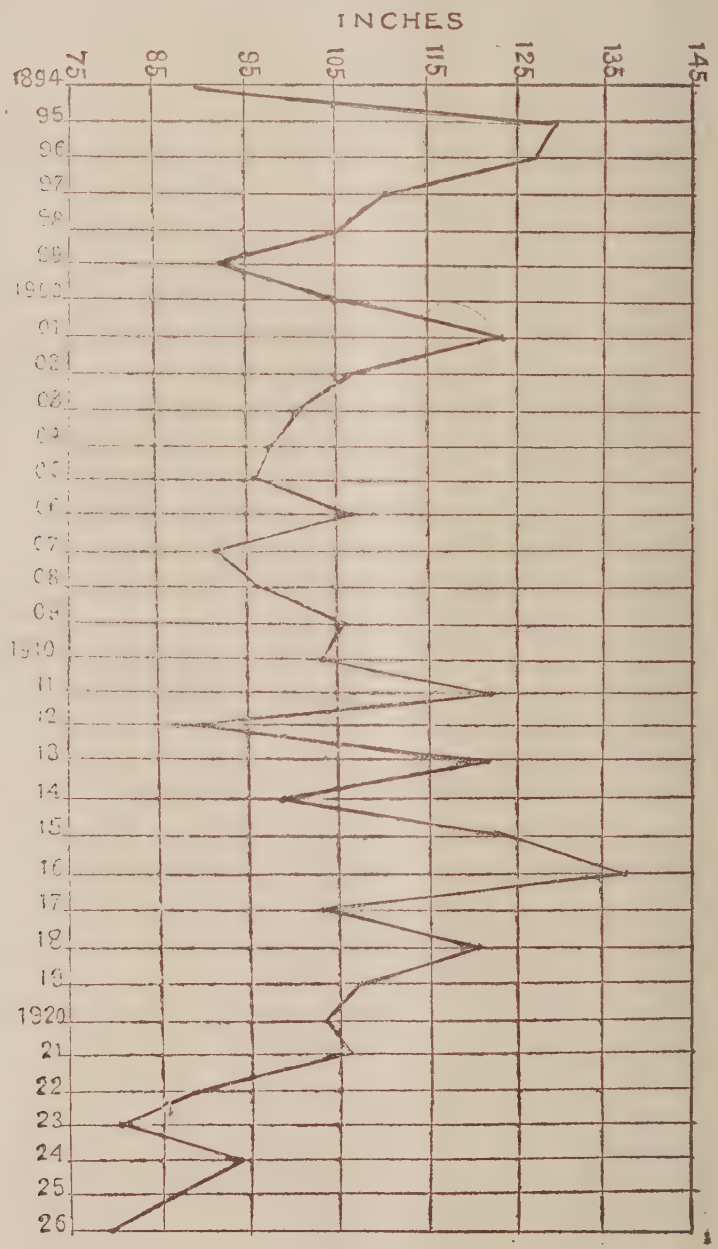
The following gives the rainfall recorded at the Botanic Gardens and the xperiment Station during the period under report.

Month.	Botanic Gardens.	Experiment Station.
January	5·41	6·28
February	3·16	2·96
March	1·74	2·21
April	1·82	1·90
May	1·97	1·88
June	7·76	7·62
July	9·85	10·12
August	13·05	12·62
September	10·12	8·84
October	9·04	11·17
November	10·82	9·68
December	4·09	3·92
Total	79·17	78·86

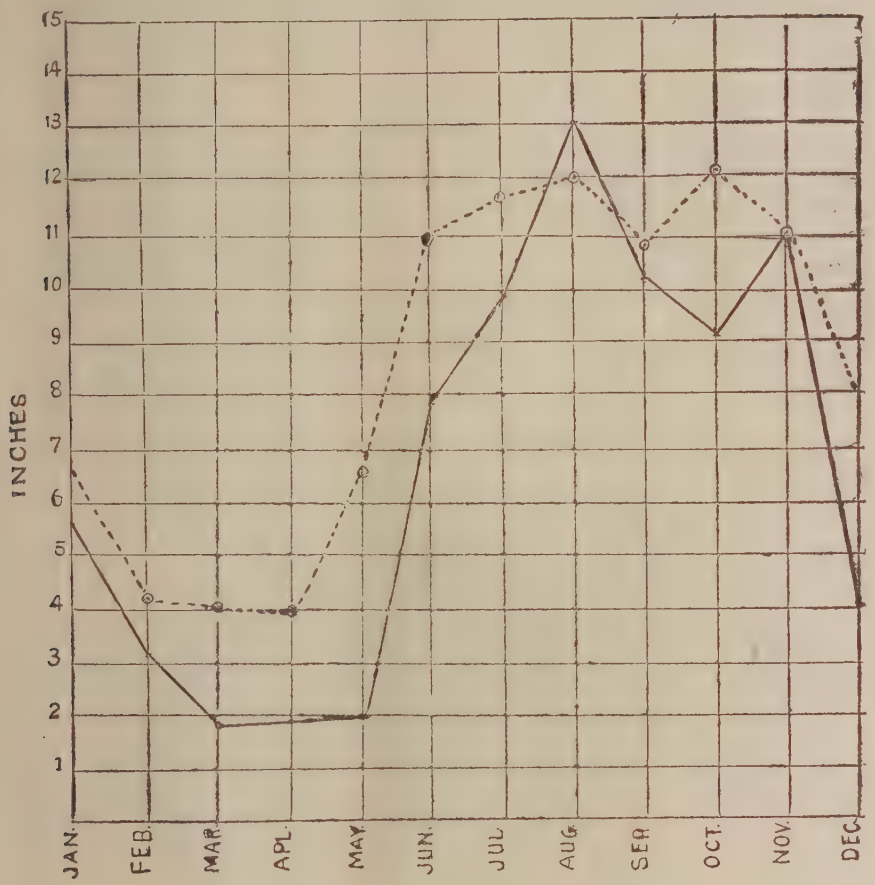
At the Botanic Gardens rain was recorded on 250 days, and the heaviest rain ll on August 23rd, when 1·75 inches were measured. Rain fell at the Experi-

ment Station on 283 days, the heaviest fall was recorded on July 22nd, when inches fell.

Chart I.—Annual Rainfall, Botanic Gardens, St. Vincent, 1894–26.



ART 2.—Monthly Rainfall, Botanic Gardens, St. Vincent, 1894–1926.



Black line represents monthy rainfall, 1926.
Dotted line represents mean monthly rainfall, 1894–1926.

The following gives the mean temperature, average degree humidity, and the mean barometric pressure in inches for each month during the year :—

Meteorological Observations, Experiment Station, for 1926.

Month.	Mean Temperature F°.	Average degree of humidity. Saturation 100.	Mean barometric pressure in inches.
January ...	79·2	66·6	30·084
February ...	78·6	64·8	30·084
March ...	79·8	64·0	30·088
April ...	80·8	62·3	30·097
May ...	82·1	66·8	30·038
June ...	81·4	71·2	30·041
July ...	81·4	73·1	30·023
August ...	81·4	72·0	30·031
September ...	81·8	71·8	29·981
October ...	81·3	73·4	29·962
November ...	81·1	74·1	29·958
December ...	79·8	65·1	29·984
Mean ...	80·7	68·8	

Atmospheric Pressure.

The reading of the Barometer, corrected for instrumental error, elevation temperature, ranged from 30·189 on February 21st, to 29·821 inches on Novem 16th.

Official Visitors.

During December a party of Post-Graduate Students from the Imperial Coll of Tropical Agriculture visited St. Vincent to study cotton growing under fi conditions. These were accompanied by the Acting Principal, Mr. G. Evans a Mrs. Evans, Professors H. R. Briton-Jones and E. E. Cheeseman. The follow is a list of the names of the students:—Messrs M. Afzal, D. W. H. Baker, P. Bowmaker, W. P. K. Findlay, M. Greenwood, W. V. Harris, K. T. Hartl O. V. S. Heath, H. K. Hewison, J. L. B. Kincaid, D. MacDonald, J. S. Moerd H. Musk, V. F. O. Olivier, L. H. A. Stone, J. E. Symond, O. L. Thomas a T. L. Williams.

VETERINARY REPORT.

The post of Veterinary Surgeon was not filled during the year. The necess for doing so did not arise.

Microscopic examination of ears of animals for anthrax was performed by t Honourable the Colonial Surgeon at the Colonial Hospital.

The vaccination of stock for export was performed by the Governme Vaccinating Officer.

The total sum expended on veterinary work was £42 made up as follows:

	£	s.	d.
Salary and Travelling Allowance, Government Vaccinating Officer	30	0	0
Burial of Carcasses	12	0	0
Total	£42	0	0

Anthrax.

No cases of anthrax have been recorded in St. Vincent since the year 1914.

Vaccination.

Twenty-five animals were vaccinated during the year for export to St. Luci Certificates were issued for 2,714 hides and skins shipped to Barbados which we valued at £214. 18. 8, in addition 120 hides valued at £6 were exported to Briti Guiana.

The following table gives exports of animals for which no certificates we given:—

Table A.

Class of Animal.	Number.	Value. £
Sheep ...	452	239
Goats ...	1,192	486
Pigs ...	1,267	1,322
Total ...	2,911	2,047

Table B.

Showing kind, number and value of stock in pounds sterling for which erinary certificates were granted, also the Colonies to which the animals were orted.

s of Animals.	Barbados.		Trinidad.		St. Lucia.		Total.	
	Number.	Value. £	Number.	Value. £	Number.	Value. £	Number.	Value. £
le ...	144	1,291	1	6	59	448	204	1,745
ses ...	11	288	—	—	—	—	11	288
s ...	62	170	16	51	—	—	78	221
es ...	—	—	23	374	—	—	23	374
ep ...	56	44	—	—	—	—	56	44
...	—	—	—	—	2	2	2	2
otal ...	273	1,793	40	431	61	400	374	2,674

Imports.

Seven animals valued at £59 were imported during the year. These were for eding purposes.

Table C.

Class of Animal.	Number.	Value. £
Cattle ...	4	45
Ass ...	1	10
Goats ...	2	4
Total ...	7	59

Table D.

Showing deaths of animals in districts from natural causes.

District.	Cattle.	Goats.	Pigs.	Total.
Kingstown ...	20	3	7	30
Calliaqua ...	4	—	—	4
Mesopotamia ...	5	—	—	5
Total ...	29	3	7	39

Table E.

Showing deaths of animals in each month of the year ended December 31st, 1

Months.	Cattle.	Goats.	Pigs.	Total.
January ...	2	1	—	3
February ...	1	—	1	2
March ...	2	1	—	3
April ...	3	—	—	3
May ...	2	1	1	4
June ...	1	—	—	1
July ...	2	—	—	2
August ...	2	—	1	3
September ...	3	—	1	4
October ...	1	—	1	2
November ...	7	—	2	9
December ...	3	—	—	3
Total	29	3	7	39

Report on the Agricultural Credit Societies for the Year 1926.

This is the fifteenth report on these Societies submitted since their inception. loans contracted during 1925 were repaid in 1926. The amount of money ed during the year was £1,586, being £126 more than that obtained during 5.

It will be seen that one Society completed the repayment of a loan contracted e time ago. There are now only two Societies that owe large sums of money, ing Village, which owes £118. 11. 0. and Union Island, which owes £121. rouallie Society owes some £4. One Society, Redemption, after straightening its affairs commenced to function again during the year, and obtained from the k a loan of £90.

Below is given a short account of the transactions of each Society with Barclays k and other Institutions. The membership of each is given as it appears in Registrar's Records.

Georgetown. The loan of £300 obtained by Georgetown Society from clays Bank in June 1925 was repaid in May 1926. In addition to this a further of £100 was contracted in the same year from a private individual, this was promptly repaid. During 1926 the sums of £320 and £100 were borrowed n the same sources, both were obtained in the month of June and are repay- in 1927. This Society has a membership of 89.

Union. In June 1925 this Society contracted a loan from Barclays Bank for sum of £250, this was repaid in 1926. In August 1926 a further loan of 71 was obtained from the same source. The membership consists of 53 indi- uals.

Troumaca. A loan for £90 obtained by this Society in 1925 was repaid in 26 and two loans, one for £100 and one for £90 were contracted during 1926. e former was procured from a Provident Society and the latter from a Tem- ance Society. Troumaca Society has a membership of 61 individuals.

Lowmans. During the year this Society paid to the Bank the last instalment he debts contracted in 1921 and 1922. The amount, including interest, was 0. 17. 3. and it was obtained through the medium of the Courts of Law. This iety has a membership of 61.

Spring Village. This Society has made no attempt during the past year to the balance of a loan of £220 obtained from Barclays Bank in 1921. The ount repaid is £118. 11. 0, roughly half of the original loan. There are 52 mbers of this Society, and if each member had only paid a few shillings each ar since the loan was contracted, the Society would now be clear of debt.

Clare Valley, Questelles. A loan of £250 contracted in June 1925 was mptly repaid in 1926. A further loan of £250 was obtained from the same rce *i.e.* Barclays Bank in 1926. This Society is functioning well and has a mbership of 48.

Barrouallie. At the beginning of the year this Society owed Barclays Bank sum of £16. 19. 3. This money represented the amount unpaid from a loan £202 contracted in 1921. During 1926 the Society paid £13 towards wiping the debt and now only owes the small sum of £4. The number of members longing to this Society is 46.

Redemption. This Society straightened out its affairs in 1925 and com- nced to function again in 1926, a loan of £90 being obtained from Barclays nk. The Society has a membership of 56.

Orange Grove. A loan of £240 obtained from Barclays Bank in 1925 was mptly repaid in 1926, and in the latter mentioned year a further loan for the me amount was obtained. The membership of this Society is 47.

Union Island. No attempt whatsoever has been made during the year this Society to clear off its debt made to Barclays Bank. A loan of £400 obtained in 1921 and at the time of writing the sum of £121. 16. 1 remains paid. It is quite clear that the members of this Society do not intend to pay u the utmost pressure is brought to bear on them. This Society is a large one c sisting of some 94 members.

Bequia. A loan of £130 was obtained from Barclays Bank in June 1 and repaid in 1926. In the latter mentioned year a further loan of £125 contracted which falls due in 1927. This Society has a membership of 27.

Buccament, Biabou, Marriaqua, Calliaqua, Layou, Harmony Hall, Bel Gomea and Canouan did not contract any loans during the year. None of th Societies owe money. The following gives respectively the membership each :—18, 80, 74, 56, 45, 43, 67, 17.

TABLE 1.

Statememt of Transactions.

Name of Society.	Date of Registration.	Total number of members at December 31, 1926.	Loans in 1926. £	Total loans sin registration t December 31, 19 £
Georgetown Agric. Credit Society ...	24. 11. 13.	89	420	3,550
Union „ „ „ ...	24. 11. 13.	53	271	2,351
Chateaubelair „ „ „ ...	24. 11. 13.	29	—	1,250
Troumaca „ „ „ ...	24. 11. 13.	57	190	2,780
Lowmans „ „ „ ...	24. 11. 13.	61	—	1,775
Stubbs „ „ „ ...	24. 11. 13.	89	—	1,950
Spring Village „ „ „ ...	20. 5. 14.	52	—	1,180
Buccament „ „ „ ..	20. 5. 14.	18	—	1,215
Clare Valley-Questelles „ ...	8. 9. 14.	48	250	2,785
Barrouallie „ „ „ ...	11. 2. 15.	46	—	1,107
Biabou „ „ „ ...	31. 1. 16.	80	—	1,489
Marriaqua „ „ „ ...	16. 3. 16.	74	—	1,420
Calliaqua „ „ „ ...	5. 8. 16.	56	—	1,800
Belair-Gomea „ „ „ ...	5. 8. 16.	67	—	2,020
Orange Grove „ „ „ ...	23. 3. 17.	47	240	2,500
Redemption „ „ „ ...	23. 5. 17.	56	90	1,265
Union Island „ „ „ ...	23. 5. 17.	94	—	2,368
Bequia „ „ „ ...	23. 5. 17.	27	125	1,173
Layou „ „ „ ...	18. 6. 18.	45	—	945
Harmony Hall „ „ ...	2. 7. 17.	43	—	385
Canouan „ „ „ ...	9. 8. 17.	17	—	80
		1,147	1,586	35,328

TABLE 2.

COMPARATIVE STATEMENT SHOWING HOW LOANS WERE OBTAINED.

Period.	From where obtained.	Amount. £	Rate of Interest per cent.	Total. £
1913-14	Governor in Council	430	6	430
1914-15	" " "	100	6	
	Colonial Bank	905	8	
	Provident Society	40	6	
	Private Individual	25	10	1,070
1915-16	Governor in Council	50	6	
	Colonial Bank	800	8	
	Provident Society	50	6	900
1916-17	Colonial Bank	2,555	8	
	Provident Society	150	6	2,705
1917-18	Colonial Bank	3,320	8	
	Provident Society	150	6	
	Temperance Society	80	6	
	Private Individual	100	6	3,650
1918-19	Colonial Bank	4,201	8	
	Provident Society	160	6	
	Temperance Society	80	6	4,441
1919	Colonial Bank	3,774	8	
	Private Individual	275	6	
	Provident Society	175	6	4,224
1920	Colonial Bank	4,451	7	
	Provident Society	190	6	
	Private Individual	165	6	
	Temperance Society	80	6	4,886
1921	Colonial Bank	4,614	7	
	Provident Society	215	6	
	Temperance Society	80	6	
	Private Individual	100	7	5,009
1922	Colonial Bank	1,682	7	
	Provident Society	115	6	
	Temperance Society	85	6	
	Private Individual	100	8	1,982
1923	Colonial Bank	1,040	7	
	Private Individual	100	8	
	Provident Society	100	6	
	Temperance Society	100	6	1,340
1924	Colonial Bank	1,091	7	
	Provident Society	100	6	
	Temperance Society	90	6	
	Private Individual	100	8	1,381
1925	Colonial Bank	1,170	7	
	Provident Society	100	6	
	Temperance Society	90	6	
	Private Individual	100	7	1,460
1926	Barclays Bank	1,296	7	
	Provident Society	100	6	
	Temperance Society	90	6	
	Private Individual	100	7	1,586

TABLE 3.

SUMMARY.

The loans repaid during the year amounted to ...	£1,460	0	0
The total loans obtained since the Societies were registered to December 31st, 1926	35,328	0	0
Interest on loans paid during 1926	110	15	8
Total interest paid from date of establishment to December 31st, 1926	2,483	16	5½
Loans outstanding other than those contracted in 1926	345	0	0

Committee of Management, Government Cotton Ginnery.

T. P. Jackson, Esquire, Agricultural Superintendent, Chairman.
Hon. J. H. Otway, Colonial Treasurer.
„ D. Hadley,
„ W. M. Grant,
H. P. Hazell, Esquire,
H. L. Hayward, „
E. M. Beach, „
V. D. Archer, Esquire, Secretary.

Staff of Government Cotton Ginnery.

C. H. Findlay, Manager.
A. W. Dowers, Overseer.
C. E. Best, Mechanic.
C. Bute, Cotton Purchaser.
S. E. Deane, Pay Officer.
Miss E. Cropper, Clerical Assistant.

REPORT ON THE WORKING OF THE GOVERNMENT COTTON GINNERY FOR SEASON 1926–27.

The following section was prepared by the Manager of the Govern Cotton Ginnery :—

Ginning.

The seed cotton received for ginning during the 1926-27 season amounte 1,026,537 lb. of white, and 275,244 lb. of stained Sea Island, making a quantity of 1,301,781 lb. - a decrease of 205,106 lb. on the previous season's of 1,506,887 lb. which consisted of 1,337,943 lb. of white and 168,944 lb stained. Ginning began on 6th December, 1926, and ended on 10th June, 1 The attack on the cotton crop by cotton worms caused a set back to the crop wh had the effect of protracting the period of ginning. In 1925-26 when a m larger crop was handled ginning lasted from 2nd December to 6th May. stained cotton formed 21·14 per cent of the total quantity received, as aga 11·21 per cent. in 1925-26.

The total quantity of lint obtained was 345,475 lb., of which 273,289 lb. w white and 72,186 lb. stained. The stained lint was therefore more than 20 cent of the total quantity ginned, but it must not be assumed that this ratio ho good for the Colony's production for the year ; at times a grower's white cotto ginned by one ginnery and the stained by another. There was a decrease 60,348 lb. in the quantity of lint ginned as compared with the previous year.

Oil Expressing.

Oil was expressed from 1,082,387 lb. of cotton seed, of which 351,526 came from the Kingstown Cotton Factory. The quantity of seed from which was expressed during the previous season was 1,299,000 lb., so that this seaso figures show a decrease of 216,613 lb.

All the crude oil expressed was refined by the Ginnery, and yielded 9,5 gallons, of which 7,050 have been sold at the time of writing. The remainin quantity will probably be disposed of before oil from next crop is refined.

The residue from the oil refining vat is used for the manufacture of soa 5,000 bars were obtained during the year, and of these 4,400 bars have been sol The trade in this article showed a marked improvement over that of the previou year.

Purchase of Cotton on the Co-operative System.

An advance of 10 cents per lb. was paid on white Sea Island seed cotton an $2\frac{1}{2}$ cents per lb. on stained. The purchases amounted to 360,388 lb. of white an 91,005 lb. of stained, making a total of 451,393 lb., which shows an increase o 319,873 lb. over the total quantity purchased during the 1925-26 season. The principal reason for this large increase was the stagnant condition of the Sea Island cotton market. Growers who in ordinary circumstances would have shipped all their cotton to England, sold a proportion of their crop to the Ginnery for spot cash. In addition, other local dealers in cotton did but little business during the year.

The white lint amounted to 98,018 lb., while the stained was 23,468 lb., a total quantity of 121,486 lb. as compared with 36,214 lb. for the previous year. Thirty-five bales of white and thirty of stained cotton have been sold, leaving 238 bales of white and 36 of stained on hand at the time of writing. In addition to the preceding there are 9 bales of white from the 1923-24 crop, 7 white from 1924-25, and 13 each of white and stained from the 1925-26 crop unsold.

The cotton which remained unsold for the 1925-26 crop was valued at 2/- lb. for white and 8d. for stained, and a bonus of 22 per cent was declared in uary, 1927.

Purchase of Corn on the Co-Operative System.

Advances were made at the rate of $1.25 per 100 lb. on shelled and 88 cents 100 lb. on cob corn. The purchases amounted to 37,933 lb. on the cob and 929 lb. shelled, from which 54 tons of kiln-dried corn were obtained. A better l demand ruled for this article than in the previous season ; markets outside of Colony were well supplied with South American corn. After local requirements had been satisfied, the excess, 24 tons, was exported to Barbados.

In November, 1926, a bonus of 36·6 per cent was paid on the 1925-26 crop which advances similar to those mentioned above had been paid.

Other Transactions.

The quantity of grain, etc., received and stored amounted to 19,259 lb. The ntity of corn shelled was 40,896 lb., and the amount ground into cornmeal or ck-feed was 36,456 lb. The quantity of corn that was kiln-dried amounted to 2,084 lb. Cotton seed selected and disinfected for planting totalled 13,143 lb., which 8,143 lb. were prepared for planters and 5,000 lb. for sale. The quantity manure obtained by disintegration was 254,612 lb., of which 70,042 lb. belonged the Kingstown Cotton Factory.

The Manager's office, which was a one-storey building, was converted into a o-storey building with the object of providing a storeroom in the basement. this a strong-room of concrete for storing books and records was constructed. neral repairs were effected to other buildings.

The following is a summary of transactions for the past two years :—

	1925-26.		1926-27.	
Seed Cotton received and ginned ...	1,506,887	lb.	1,301,781	lb.
Cotton Seed expressed	1,299,000	,,	1,082,387	,,
,, ,, disintegrated	175,988	,,	254,612	,,
Seed Cotton purchased	131,520	,,	451,393	,,
Corn purchased	127,954	,,	130,276	,,
Corn kiln-dried	130,979	,,	122,084	,,
Cob Corn shelled	36,138	,,	40,896	,,
Corn ground into meal or stock feed ...	61,253	,,	36,456	,,
Cotton Seed selected and disinfected for planting	12,134	,,	13,143	,,
Cotton Seed disinfected only ...	410	,,	...	
Grain, etc.. fumigated and stored ...	21,913	,,	19,259	,,
Cotton Seed oil refined	8,000	gails.	9,500	galls.
Soap manufactured	3,000	bars.	5,000	bars.
Cotton Seed Meal delivered ...	550	tons.	500	tons.